Hurricane Ike Situation Report # 2

September 14, 2008 (12:00 PM EDT)

http://www.oe.netl.doe.gov/emergency_sit_rpt.aspx

Summary

Electricity					
Impacted State	Electric Custor	mer Outages	% of State Out		
Louisiana		198,917	9%		
Arkansas		154,203	10%		
Texas		2,471,962	23%		
TOTAL:		2,825,082			
	Petroleum & 1	Vatural Gas			
		Amount	% Capacity Out*		
Crude Oil Production Shut-In (b/d)		1,296,521	99.7%		
Natural Gas Production Shut-in (mmcf/d)		7,285	98.4%		
Refinery Capacity Shut down (b/d)		3,861,246	NA		

Total state customers are based on 2006 EIA Customer Data.

Note: due to a large number of service providers, including investor owned utilities and cooperatives, the number of customer outages reported may not be comprehensive.

Source:

Crude Oil and Natural Gas Production Data from Minerals Management Service.

Refinery Status confirmed by company or on company web site and through various trade press sources.

Highlights:

- At 5:00 AM EDT September 14, the National Hurricane Center issued its last report for Ike. Ike has been downgraded to a Tropical Depression with maximum sustained winds of 35 mph. The center was located about 75 miles southeast of Springfield, Missouri, moving to the northeast.
- As of 10:00 AM EDT September 14, there are 2,825,082 customers without power in Texas, Louisiana and Arkansas. This includes 2,471,962 in Texas and 198,917 in Louisiana, and 154,203 in Arkansas. In Texas, the majority of these customers are served by electricity distributors that received their power from CenterPoint and Entergy customers. Since the September 13 Situation Report customer outages have increased in Texas; in addition Arkansas also reports outages as Ike has moved through the State. Outages in Louisiana have declined due largely to continued restoration of outages associated with Gustav.

^{* %} capacity out represents percent of production capacity in the Gulf of Mexico.



- As of 10:30 AM EDT September 14, Gulf Ports and waterways are still closed from Houston, TX east to Lake Charles, LA. Corpus Christi and Freeport, Texas re-opened as of 8:50 PM EDT, September 13, but there are restrictions in the Corpus Christi ship channel which limits movements to vessels with drafts less than 35 feet. In the New Orleans area, the Industrial Navigation Canal is still closed in sections. The Gulf Intracoastal Waterway is also closed, west of Harvey Locks, in three different sections. The Lower Mississippi River is limited to vessels with drafts less than 35 feet over a 20 mile section from mile marker 0 to the sea buoy.
- The South Texas and Comanche Peak nuclear power plants in Texas did not shut down and are not expected to be affected by the storm. Sabine Station (natural gas generating facility) was taken off-line as a precaution.
- As of this 10 AM EDT September 14, Colonial pipeline has resumed operations and is operating at reduced flow.
- As of 9:15 AM EDT September 14, the LOOP reports that it continues to operate limited
 operations from its Clovelly storage facility. Tanker offloadings remain suspended. Capline,
 which receives its crude oil from the LOOP, reported reduced movements along its pipeline.

ESF 12 Actions:

- ESF-12 is working with DHS to facilitate air-based damage assessments of the CenterPoint and Entergy electric transmission systems. ESF-12 responders will participate in the flights to assist in these assessments.
- ESF-12 is staffing the FEMA Region VI Regional Response Coordination Center (RRCC) in Denton, TX, the FEMA Region VI Joint Field Office (JFO) in Austin, TX, the FEMA Region VI (JFO) in Baton Rouge, LA, and the National Response Coordination Center (NRCC) in Washington, DC. In addition, a petroleum expert has been deployed to San Antonio, TX to serve as part of FEMA's National Incident Management Assistance Team (IMAT) and an electricity expert has been deployed to join the Region IV IMAT in Houston, TX.

Situation Report Detail

Petroleum & Gas Information

Oil & Gas Offshore Production Shut In Status for Affected Area						
Location Amount Shut In Pre-event Production % Shut In						
Crude Oil (B/D)	1,296,521	1,300,000	99.7%			
Natural Gas (MMCF/D)	7,285	7,400	98.4%			

Source: Minerals Management Service



- As of September 13, the Minerals Management Service (MMS) reports 7,285 million cubic feet per day (MMcf/d) of the Gulf's natural gas production remains shut-in, equivalent to 98.4 percent of the Gulf production. MMS reports 1,296,521 barrels/day of the Gulf's crude production remains shut-in, equivalent to 99.7 percent of the Gulf's crude production. A total of 611 production platforms, or 83.5 percent of the Gulf's 717 manned platforms, have been evacuated. Personnel from 101 rigs, representing 83.5 percent of those operating in the region, have been removed.
- On September 12, the Louisiana Department of Natural Resources reported that only 33,428 barrels/day or 21 percent of normal Louisiana production has been restored. Operators in 17 parishes and in State offshore areas normally produce 155,767 barrels/day (the numbers are in addition to MMS reports of Federal offshore production). On September 12, 86,096 barrel/day or 55 percent of the normal production remains shut-in and status is unknown for 36,242 barrels/day.
- As of 8:00 PM EDT September 13, fifteen refineries in Texas and Louisiana are reported shut down due to Hurricane Ike. Of the shut downs, one refinery in the Corpus Christi area is not confirmed. These refineries located in Port Arthur, Houston/Texas City, and Corpus Christi, Texas regions and Lake Charles, Louisiana have a total operable capacity of 3.9 million b/d. (See table below.)
- Chevron reports that numerous retail stations in Houston and Galveston are reporting power outages. They are deploying generators to repower key stations and provide fuel to customers. Additional Chevron transport trucks are being sent into the Houston area to speed refueling at stations.
- ConocoPhillips reports that outlets along evacuation routes in the south Texas area are a priority for fuel supply. The company reports that additional fuel supplies have been made available for outlets in those areas. While they report a few spot retail store outages in the area, most outages have been reported in Louisiana which were due to Hurricane Gustav.
- As of 8:30 AM EDT September 13, the Strategic Petroleum Reserve (SPR) sites at Bryan Mound, TX, Big Hill, TX, and West Hackberry, LA remain shut down. The Bayou Choctaw SPR site is operational.
- Major crude pipelines originating in Texas and Louisiana shut down operations in advance of Hurricane Ike. Colonial pipeline announced this morning (September 14) that it had received electricity at its Texas location and has restarted its line at reduced rates. Explorer announced that it has conducted an initial assessment of its Gulf Coast facilities, which appear to have no damage. Response teams are working to restore power to the impacted facilities. (See table below.).



	Refineries in the Path of Gustav / Ike as of 9/14/08 10:00 AM EDT Capacity (B/D)						
Refinery Impacted	Location	Storm	Operating	Shut Down	Restarting	Reduced Runs	Back to Normal
Pascagoula/Mobile Region	on					-	
Chevron	Pascagoula, MS	G	330,000			330,000	
Shell	Saraland, AL	-	86,000			,	
Pasca	goula/Mobile Total		416,000	0	0	330,000	
Lower Mississppi River I			-				
Alon (Formerly Valero)	Krotz Springs, LA	G	80,000			80,000	
Chalmette Refining	Chalmette, LA	G	192,760				192,760
ConocoPhillips	Belle Chasse, LA	G	247,000		247,000		,
ExxonMobil	Baton Rouge, LA	G	503,000			503,000	
Marathon	Garyville, LA	G	256,000			,	256,000
Motiva	Norco, LA	G	236,400			236,400	,
Motiva	Convent, LA	G	235,000		235,000		
Murphy Oil	Meraux,LA	G	120,000		,0	120,000	
Placid Refining	Port Allen, LA	G	56,000			0,000	56,000
Shell	Saint Rose, LA	G	55,000			55,000	20,000
Valero	Norco, LA	G	185,003			55,655	185,003
	sissppi River Total	<u>.</u>	2,166,163	0	482,000	994,400	689,763
Lake Charles Region			2,100,100		102,000	00 1,100	000,100
Calcasieu	Lake Charles, LA	G+I	78,000	78,000		1	
Citgo	Lake Charles, LA	G+I	429,500	70,000		429,500	
ConocoPhillips	Westlake, LA	G+I	239,400			239,400	
	Lake Charles Total	αŦī	746,900	78,000	0	668,900	0
Port Arthur Region	Luite Onuries Fotar		7-10,000	70,000	· ·	000,000	
ExxonMobil	Beaumont, TX	G+I	348,500	348,500			
Motiva	Port Arthur, TX	G+I	285,000	285,000			
Total Petrochemicals	Port Arthur, TX	G+I	232,000	232,000			
Valero (formerly Premcor)		G+I	289,000	289,000			
valero (lorifieriy i ferricor)	Port Arthur Total	G+I	1,154,500	1,154,500	0	0	
Harratan (Calirantan Bani			1,134,300	1,134,300	U	U	
Houston/Galveston Regi BP			407 700	407.700			
ConocoPhillips	Texas City, TX	1	467,720 247,000	467,720			
•	Sweeny, TX	!		247,000			
Deer Park	Deer Park, TX	1	329,800	329,800			
ExxonMobil	Baytown, TX	1	567,000	567,000 270.600			
Houston Refining	Houston, TX	1	270,600	-,			
Marathon	Texas City, TX	0.1	76,000	76,000			
Pasadena Refining	Pasadena, TX	G+I	100,000	100,000			
Valero	Houston, TX	1	83,000	83,000			
Valero	Texas City, TX	1	199,500	199,500 2,340,620		0	
	on/Galveston Total		2,340,620	2,340,620	0	U	
Corpus Christi Region	On the contract TV	, ,	450.000	1	-	150,000	
Citgo	Corpus Christi, TX	!	156,000	000 100		156,000	
Flint Hills Resources*	Corpus Christi, TX	1	288,126	288,126			
Valero	Corpus Christi, TX	-	142,000				
Valero	Three Rivers, TX	-	93,000	000 100		480.000	
	orpus Christi Total		679,126	288,126		156,000	
TOTAL			7,503,309	3,861,246	482,000	2,149,300	689,763

Note: The table does not include all refineries in the PADD III, Gulf Coast Region.

Storm column indicates hurricanes impacting refineries: G = Gustav; I = Ike, G+I = Both storms, and - = no impact.

Sources: Confirmed by company or on company web site. Various trade press sources. *Not confirmed.



	Pipelines in the Path of Gustav / lke as of 9/14/08 10:00 AM EDT							
Туре	Name	Start	Terminus	Capacity (barrels/day)	Shut Down	Partial Shut Down	Reduced Rates	Operating
Crude	Capline	LA	IL	1,200,000			1,200,000	
Crude	LOOP/Locap	LA	LA	1,200,000		1,200,000		
Crude	Genesis gathering/refinery	TX, MS, Al	TX, MS, AL	NA	NA			
Crude	Marathon gathering	GOM	LA/TX	NA	NA			
Crude	Sunoco Logistics/Western	TX	TX	NA	NA			
Product	Centennial	TX	IL	210,000	210,000			
Product	Central Florida	FL	FL	115,000				115,000
Product	Colonial	TX	NJ	2,400,000			2,400,000	
Product	CP Seaway Products	TX	OK	85,000	85,000			
Product	CP Sweeny to Pasadena	TX	TX	115,000	115,000			
Product	Explorer	LA/TX	IN	700,000	700,000			
Product	Longhorn	TX	TX	72,000	72,000			
Product	Magellan	TX	CO, MN, WI, IL	120,000		120,000		
Product	NuStar/Texas Gulf Coast	TX	TX	100,000	100,000			
Product	Plantation	LA	VA	600,000			600,000	
Product	TEPPCO	TX	PA, NY	330,000		330,000		
NGL	Dixie	TX	NC	100,000		100,000		
NGL	Enterprise	TX	IL, MN	641,000	641,000			

Source: Status of pipelines from Association of Oil Pipe Lines; Capacity data from company web sites.

- As of 7:00 AM EDT September 14, there have been no reports of damage to natural gas pipelines or production infrastructure. All major offshore natural gas pipelines are shut in due to evacuations of production interconnected platforms and onshore facilities. As mandatory onshore evacuations are lifted, debris removal from on-shore facilities will begin with damage assessments to follow. Assessments of offshore facilities will begin with flyovers as weather permits. Re-population of off-shore facilities is not expected to begin until Tuesday. A table providing updated pipeline critical notices posted by pipelines is below.
- As of 11:30 PM EDT September 13, Texas Gas Transmission confirmed that the Henry Hub was not accepting flow. Henry Hub remains shut in.



Force Majeure / Critical Notice Posting by Natural Gas Pipelines as of 9/14/08 7:00 AM EDT					
Pipeline Name	Time Stamp	Notice (Status)			
ANR Pipeline Co.	9/10/08	Patterson Compressor station has shut down effectively eliminating all upstream points until further			
Chandeleur Pipeline Co.	9/12/08	Notified customers of loss of all offshore production.			
Columbia Gulf Transmission Co.	9/14/08	Flow from off-shore points has been reduced to 21% of normal operating capacity.			
Destin Pipeline Co.	9/9/08	Force Majeure carried over from Gustav - all offshore points remain shut-in.			
Discovery Gas Transmission	9/12/08	Force Majeure declared Friday, Sept 12.			
Enbridge (UTOS)	9/14/08	Force Majeure declared Thursday, Sept 11. Houston offices closed until 9/15/2008.			
Garden Banks Gas Pipeline	9/10/08	Force Majeure declared Tuesday, Sept 9.			
High Island Offshore System	9/10/08	Forced Majeure declared Wednesday, Sept 10.			
KinderMorgan (Texas & Tejas)	9/13/08	Force Majeures declared Friday, Sept 12. No storage capability.			
Manta Ray Offshore Gathering	9/9/08	Force Majeure declared Tuesday, Sept 9.			
Mississippi Canyon Pipeline	9/10/08	Force Majeure carried over from Gustav - unknown at time to return to service.			
Natural Gas Pipeline Co of Am.	9/13/08	Force Majeure declared Thursday, Sept 11. Compressor Stations down in Texas and Louisana.			
Nautilus Pipeline Co.	9/10/08	Force Majeure delcared Tuesday, Sept 9.			
Sabine Pipe Line	9/12/08	Force Majeure declared late Friday, Sept 12 - entire system shut in including Henry Hub.			
Sea Robin Pipeline Co.	9/11/08	Sea Robin processing plant shut down, mandatory evacuation.			
Southern Natural Gas Co.	9/9/08	Noticed of reduced flow - Producers have notified SNG of evacuations of platforms.			
Stingray Pipeline Co.	9/10/08	Forced Majeure declared Wednesday, Sept 10.			
Tennessee Gas Pipeline	9/13/08	Force Majeure issued for Blue Water East Leg, Hheader, West Leg and Southwest Leg. Mandatory evacuation of TX compressor stations reducing flow.			
Texas Eastern Transmission	9/13/08	Receipt points on the South Pass and Main Pass lines are shut-in. Limited capacity available in South and East Texas.			
Texas Gas Transmission	9/13/08	Henery Hub is not accepting gas from pipeline. Notice of reduced flow - Producers have notified TGT of			
Transcontinental Gas Pipe Line	9/13/08	Approximately 1.0 Mdt/d of production has been shut-in. Instituting Emergency Gas Supply Procedures			
Trunkline Gas Pipeline	9/10/08	Expecting producer shut-ins action will be taken as required. Houston offices closed Friday, September 12, 2008.			
Venice Gathering System	9/4/08	Remains shut in from the effects of Gustav.			
Dauphin Island Gathering Partners	9/10/08	Force Majeure declared. Deliveries will be unavailable until Sep 12, 2008 at the earliest and will not resume until lke has passed.			
Black Marlin Pipeline	9/12/08	Force Majeure declared Friday, Sept 12 no gas flow being accepted.			
Northern Natural	9/12/08	Force Majeure declared Frida, Sept. 12 - Matagorda Offshore Pipeline System.			

- There are 39 major natural gas processing plants in the path of Hurricane Ike with a total operating capacity of 17.6 billion cubic feet per day (Bcf/d). As of 10:00 AM EDT, September 14, thirty of these plants have been confirmed as shut down which includes those plants still impacted from Gustav. This is an increase of 2 plants reported in Situation Repot #1. The total shut down operating capacity is 14.55 Bcf/d. In addition, 8 plants with total capacity of 2.9 Bcf/d, have been confirmed as operating at reduced or normal levels and currently there is no information on the status on 1 plant with capacity of less then 0.2 Bcf/d. See table below.
- As of 10 AM EDT, September 14, many gas processing plants have reported that detailed damage assessments will take place over the next few days. Recovery rates will likely vary from facility to facility and are also dependent on recovery of upstream and downstream flows.



Nat	tural Gas Processin	g Plants ir	the Path of Ike 8	& Gustav as	of 9/14/08 10):00 AM EDT	
Capacity (million cubic feet per d					et per day)1		
Plant Name	Location	Impact	Design System Operation	Shut Down	Capable to Restart ²	Operating at Reduced Level	Normal
EAST LA / AL							
Yscloskey	St. Bernard, LA	G	1,850	1,850			
Venice	Plaquemines, LA	G	1,300	1,300			
Pelican	St. Mary, LA	G	600	600			
Larose	Lafourche, LA	G + I	600	600			
Plaquemine	Iberville, LA	G	225	225			
Burns Point	St. Mary, LA	G	160	160			
Mobile Bay (Duke)	Mobile, AL	M	300	300			
WEST LA / EAST TX							
Eunice	Acadia, LA	G + I	1,200	1,200			
Sea Robin	Vermilion, LA	G + I	950	950			
Bluewater	Acadia, LA	G + I	950	950			
Cameron Meadows	Cameron, LA	G + I	500	500			
Iowa	Jefferson Davis, LA	G + I	500	500			
Grand Chenier II	Cameron, LA	G + I	400	400			
Sabine Pass	Cameron, LA	G + I	300	300			
Stingray	Cameron, LA	G	300	300			
Lowry	Cameron, LA	G + I	265	265			
Barracuda	Cameron, LA	G + I	225	225			
Gillis	Calcasieu, LA	G + I	180	180			
Dubach	Lincoln, LA	G	175				175
East Texas (MarkWest	Panola, TX	I	780	780			
East Texas (DCP)	Panola, TX	-	750	750			
Godley (Forth Worth II)		ı	300	300			
Port Arthur	Jefferson, TX	G + I	200	200			
Carthage	Panola, TX	I	175	175			
Indian Springs	Polk, TX	I	150	N/A	N/A	N/A	N/A
CENTRAL EAST TX	· ·						
Houston Central	Colorado, TX	-	700			700	
Markham	Matagorda, TX	G + I	300	300			
Matagorda	Matagorda, TX	G + I	250	250			
Armstrong	De Witt, TX	ı	250				250
Point Comfort	Calhoun, TX	ı	200	200			
Old Ocean	Brazoria, TX	ı	200	200			
Wilcox	Lavaca, TX	ı	200	200			
La Grange	Fayette, TX	İ	200	200			
Waskom	Harrison, TX	-	150			†	150
SOUTH EAST TX							
King Ranch	Kleberg, TX	-	925				925
Shoup	Nueces, TX	-	290				290
La Gloria	Jim Wells, TX	-	265				265
Gregory	San Patricio, TX	ı	150	150			
Gulf Plains	Nueces, TX	_	150			1	150

Note: Storm column indicates hurricanes impacting processing plant: G = Gustav; I = Ike, G+I = Both storms, and M = Maintenance "N/A" (Not Available or Confirmed) identifies those plants that are in the path of Ike that have not yet been confirmed of their status.

Sources: Confirmed by company or on company web site. Various trade press sources.

¹ The capacity represents the design capacity of the plants and does not represent the actual gas flow through these plants.

² Confirmed plants capable to restart after electricity is restored or when upstream gas flow commences service.



Electricity Updates:

Arkansas:

As of: 9/14/2008 6:00 AM EDT



Electricity Outages: Utility Detail							
	Arkansas						
Utility	Outages	Total Utility	% w/o Power				
SWEPCO	675	111,109	0.6%				
Entergy	153,528	681,298	22.5%				
All Cooperatives		453,001	0.0%				
All Municipals		173,253	0.0%				
TOTAL	154,203	1,418,661					

Total state and utility customers are based on 2006 EIA Customer Data.

• As of 6:00 AM September 14, there are 154,203 customers without power in Arkansas. Entergy is reporting 153,528 outages in its Arkansas service area. Outages are increasing as Ike moves through the State.

Louisiana:

As of: 9/14/2008 10:00 AM EDT



Electricity Outages: Utility <i>Detail</i>						
Louisiana						
Utility	Outages	Total Utility	% w/o Power			
Cleco Power LLC	10,822	265,556	4.1%			
Entergy (Gulf States, Lousiana, New Orleans combined)	83,588	1,140,194	7.3%			
SWEPCO	82,046	174,213	47.1%			
All Cooperatives	22,461	413,231	5.4%			
All Municipal		156,155	0.0%			
TOTAL	198,917	2,149,349				

Total state and utility customers are based on 2006 EIA Customer Data; Electric Cooperative customer totals provided by Louisiana Public Service Commission.

Note: due to a large number of service providers, including investor owned utilities and cooperatives, the number of customer outages reported may not be comprehensive.

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- As of 10:00 AM EDT September 14, there are 198,917 customers without power in Louisiana. Of these outages, 176,544 are due to Ike. Gustav-related outages are down to 22,373 as reported by Entergy.
- As of 5:30 PM EDT September 13, remaining Gustav damage to the Entergy transmission system in Louisiana included 19 lines and 11 substations out of service, down from a peak of 241 transmission lines and 352 substations immediately following Gustav.

Texas:

As of: 9/14/2008 10:00 AM EDT



Electricity Outages: Utility Detail							
	Texas						
Utility	Outages	Total Utility	% w/o Power				
SWEPCO	90,788	168,180	54.0%				
Entergy Texas	391,174	395,000	99.0%				
CenterPoint	1,990,000	2,076,978	95.8%				
ONCOR		1,879,386					
All Cooperatives		1,749,644	0.0%				
All Municipal		1,599,664	0.0%				
TOTAL	2,471,962	7,868,852					

Total state and utility customers are based on field reports.

Note: due to a large number of service providers, including investor owned utilities and cooperatives, the number of customer outages reported may not be comprehensive.

- In Texas, over 2.4 million people are reported without power. The majority of these are customers of CenterPoint and Entergy.
- CenterPoint reports as of 8:00 PM EDT September 13, 1.99 million customers remain without power. Approximately 112,000 customers have had power restored since Ike made landfall.
- Entergy reports that 99 percent of its customers in Texas are without power as of 6:00 AM EDT September 14. As of 5:30 PM EDT September 13, transmission outages caused by Ike include 209 substations, and 152 transmission lines, out of service in Texas. Entergy will not know the extent of damage until assessments are completed.
- Entergy's Lewis Creek plant in Montgomery County, Texas, has shut down as a result of storm damage. The plant will be able to restart within a few hours after offsite power is restored. Hurricane Ike flooded Entergy's Sabine Power plant in Bridge City, Texas, with up to four feet of water. The flood has caused extensive damage to the plant that could take weeks to repair.



Restoration Updates:

- As of 8:00 PM EDT September 13, CenterPoint had restored power to 112,000 customers who lost power due to Ike. CenterPoint has 1.99 million customers without power.
- CenterPoint reports more than 7,000 mutual assistance personnel will begin arriving September 14 to assist in restoration. The company anticipates it will take four weeks or longer for restoration to be complete, and may need to request additional assistance from other utilities. Company damage assessment experts flew over the area conducting aerial surveys and documenting damage. Highlights of CenterPoint restoration to date include:
 - Restoration of the Coastal Water Authority Lynchburg water pumping station, a major source of water for the City of Houston and other smaller communities in the area
 - Service restoration for one water treatment facility and one wastewater treatment plant in the City of Houston
 - Restoration of several hospitals
- Entergy made restoration progress during the day September 13 restoring power to 106,388 customers in Louisiana who were without power, including 38,213 customers who had lost power due to Gustav. Entergy has 83,588 customers remaining without power in Louisiana.
- Entergy reports that by Monday night September 15, mutual assistance crews from other states should arrive, bringing Entergy's total restoration workforce to 14,000, with 7,000 each in Louisiana and Texas. Entergy will shift workers to Texas from Louisiana as Hurricane Gustav restoration is completed. Entergy has positioned crews in Arkansas to respond to damage from Ike there.
- On September 10, the Waterford nuclear plant has returned to service and was reconnected to the Entergy electric system. As of the morning of September 12, it is operating at 100 percent capacity. The River Bend nuclear plant is still shut down as of morning of September 12, but according to Entergy once the damaged exterior siding is repaired, River Bend will be given the go-ahead to begin the regulatory checks and inspections needed for a gradual startup.